```
$%^STN;HighlightOn=  ***;HighlightOff=***  ;

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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS  4  APR 04   STN AnaVist $500 visualization usage credit offered
 NEWS  5  MAY 10   CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS  6  MAY 11   KOREAPAT updates resume
 NEWS  7  MAY 19   Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
                   USPATFULL/USPAT2
 NEWS  9  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11   CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14   FSTA enhanced with Japanese patents
 NEWS 15  JUl 19   Coverage of Research Disclosure reinstated in DWPI

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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 NEWS IPC8     For general information regarding STN implementation of IPC 8
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* * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:13:55 ON 21 JUL 2006

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE COVERS 1907 - 21 Jul 2006 VOL 145 ISS 5
FILE LAST UPDATED: 20 Jul 2006 (20060720/ED)

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```
=> e reduced glutathione/cn
    *** REG1stRY INITIATED ***
Substance data EXPAND from CAS REGISTRY in progress...



E1            1     REDUCED FMN/CN
E2            1     REDUCED FOLATE CARRIER PROTEIN (HUMAN GENE RFC EXON 1 FRAGME
                    NT)/CN
E3            1 --> REDUCED GLUTATHIONE/CN
E4            1     REDUCED GLUTATHIONE LITHIUM SALT/CN
E5            1     REDUCED GLUTATHIONE PEROXIDASE/CN
E6            1     REDUCED GLUTATHIONE SODIUM SALT/CN
E7            1     REDUCED GLUTATHIONE THIOLATE ANION/CN
E8            1     REDUCED GREEN FFB/CN
E9            1     REDUCED HALOPERIDOL OXIDASE/CN
E10           1     REDUCED HBS/CN
E11           1     REDUCED HEMATIN/CN
E12           1     REDUCED HOPKINSIAXANTHIN/CN


=> s e3
    *** REG1stRY INITIATED ***
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.




L2       41636 L1

=> d hitrn

L2   ANSWER 1 OF 41636  CAPLUS  COPYRIGHT 2006 ACS on STN
IT     ***70-18-8***  , Reduced glutathione, biological studies
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (oxygenation-ozonation induced biochem. modifications in blood)


=> s 70-18-8/THU and dillon j?/au
L3            1 70-18-8/THU AND DILLON J?/AU

=> d

L3   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2004:999661  CAPLUS <<LOGINID::20060721>>
DN   141:388779
TI   Methods and compositions for protecting against cataract development
     associated with vitrectomies
IN     ***Dillon, James***
PA   USA
SO   U.S. Pat. Appl. Publ., 41 pp.
     CODEN: USXXCO
DT   Patent
```

```
LA   English
FAN.CNT 1
     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ---------------       ----   --------    --------------------     --------
PI   US 2004229814          A1    20041118    US 2003-650357           20030827
     WO 2005048920          A2    20050602    WO 2004-US27700          20040825
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
PRAI US 2002-406907P        P     20020828
     US 2003-650357         A     20030827


=> s us20040229814/pn
L4            1 US20040229814/PN

=> select l4 1 rn
E1 THROUGH E4 ASSIGNED

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    11.65      18.42

FILE 'REGISTRY' ENTERED AT 15:17:38 ON 21 JUL 2006
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STRUCTURE FILE UPDATES:   20 JUL 2006  HIGHEST RN 894992-91-7
DICTIONARY FILE UPDATES:  20 JUL 2006  HIGHEST RN 894992-91-7

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> s e1-e4
L5            4 (70-18-8/BI OR 50-81-7/BI OR 7727-37-9/BI OR 7782-44-7/BI)

=> s 50-81-7/rn
L6            1 50-81-7/RN

=> d

L6   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2006 ACS on STN
RN     ***50-81-7***     REGISTRY
ED   Entered STN:  16 Nov 1984
CN   L-Ascorbic acid (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   (+)-Ascorbic acid
CN   3-keto-L-Gulofuranolactone
```

CN 3-Oxo-L-gulofuranolactone
CN Adenex
CN Allercorb
CN Antiscorbic vitamin
CN Antiscorbutic vitamin
CN Ascoltin
CN Ascorbajen
CN Ascorbic acid
CN Ascorbicap
CN Ascorbutina
CN Ascorell
CN Ascorin
CN Ascorteal
CN Ascorvit
CN C-L 6/PW
CN C-Quin
CN C-Vimin
CN Cantan
CN Cantaxin
CN Catavin C
CN Ce-Mi-Lin
CN Ce-Vi-Sol
CN Cebicure
CN Cebion
CN Cebione
CN Cecon
CN Cegiolan
CN Ceglion
CN Ceklin
CN Celaskon
CN Celin
CN Cell C
CN Cemagyl
CN Cenetone
CN Cereon
CN Cergona
CN Cescorbat
CN Cetamid
CN Cetane
CN Cetane-Caps TC
CN Cetebe
CN Cetemican
CN Cevalin
CN Cevatine
CN Cevex
CN Cevimin
CN Cevital
CN Cevitamic acid
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
FS STEREOSEARCH
DR 884381-69-5, 623158-95-2, 56533-05-2, 57304-74-2, 57606-40-3, 56172-55-5, 129940-97-2, 14536-17-5, 50976-75-5, 154170-90-8, 89924-69-6, 30208-61-8, 259133-78-3
MF C6 H8 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PHAR, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

/ Structure 1 in file .gra /

```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

           78764 REFERENCES IN FILE CA (1907 TO DATE)
            1729 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           78897 REFERENCES IN FILE CAPLUS (1907 TO DATE)
              12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> s 7727-37-9/rn
L7            1 7727-37-9/RN

=> d

L7   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2006 ACS on STN
RN     ***7727-37-9***    REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Nitrogen (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Diatomic nitrogen
CN   Dinitrogen
CN   Molecular nitrogen
CN   Nitrogen (N2)
CN   Nitrogen gas
CN   Nitrogen nutrition (plant)
CN   Nitrogen-14
FS   3D CONCORD
DR   778548-56-4, 745765-07-5, 794449-54-0, 161728-27-4, 156457-45-3,
     93037-13-9, 263005-65-8
MF   N2
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CABA,
       CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN,
       CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
       MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER,
       TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
        (**Enter CHEMLIST File for up-to-date regulatory information)


/ Structure 2 in file .gra /


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

          296486 REFERENCES IN FILE CA (1907 TO DATE)
           12797 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          296781 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> s 7782-44-7/rn
L8            1 7782-44-7/RN

=> d

L8   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2006 ACS on STN
RN     ***7782-44-7***    REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Oxygen (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Dioxygen
CN   Molecular oxygen
CN   Oxygen molecule
FS   3D CONCORD
DR   1338-93-8, 14797-70-7, 80217-98-7, 80937-33-3
MF   O2
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CABA,
       CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN,
       CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
```

```
      MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER,
      TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VTB
        (*File contains numerically searchable property data)
    Other Sources:   DSL**, EINECS**, TSCA**
        (**Enter CHEMLIST File for up-to-date regulatory information)


/ Structure 3 in file .gra /


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

         385963 REFERENCES IN FILE CA (1907 TO DATE)
          35594 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
         386372 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> d his

     (FILE 'HOME' ENTERED AT 15:13:55 ON 21 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 15:14:19 ON 21 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:14:41 ON 21 JUL 2006
               E REDUCED GLUTATHIONE/CN

     FILE 'CAPLUS' ENTERED AT 15:14:41 ON 21 JUL 2006
               S E3

     FILE 'REGISTRY' ENTERED AT 15:14:47 ON 21 JUL 2006
L1             1 S E3/CN

     FILE 'CAPLUS' ENTERED AT 15:14:48 ON 21 JUL 2006
L2         41636 S L1
L3             1 S 70-18-8/THU AND DILLON J?/AU
L4             1 S US20040229814/PN
               SELECT L4 1 RN

     FILE 'REGISTRY' ENTERED AT 15:17:38 ON 21 JUL 2006
L5             4 S E1-E4
L6             1 S 50-81-7/RN
L7             1 S 7727-37-9/RN
L8             1 S 7782-44-7/RN

=> s (vitreous(A)replacement) and 70-18-8 and 50-81-7
L9             0 (VITREOUS(A)REPLACEMENT) AND 70-18-8 AND 50-81-7

=> s (vitreous(A)replacement) and 70-18-8/rn
L10            0 (VITREOUS(A)REPLACEMENT) AND 70-18-8/RN

=> e vitreous replacement/ct
'CT' IS NOT A VALID EXPAND FIELD CODE FOR FILE 'REGISTRY'
The indicated field code is not available for EXPAND in this
file.  To see a list of valid EXPAND field codes, enter HELP
SFIELDS at an arrow prompt (=>).

=> file caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                32.22      50.64

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FILE LAST UPDATED: 20 Jul 2006 (20060720/ED)

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```
=> e vitreous replacement/ct
E#   FREQUENCY    AT     TERM
--   ---------    --     ----
E1           0     2     VITREOUS HUMOR BARRIER BLOOD/CT
E2        1337    94     VITREOUS MATERIALS/CT
E3           0       --> VITREOUS REPLACEMENT/CT
E4           0     2     VITREOUS SEMICONDUCTORS/CT
E5           0    16     VITREOUS SILICA/CT
E6           0     2     VITREOUS SILICA SYNTHETIC FIBERS/CT
E7         127     5     VITREOUS STATE/CT
E8           0     2     VITREOUS STRUCTURE/CT
E9           0     2     VITREOUS SUBSTANCES/CT
E10          0     1     VITREUM/CT
E11          0     1     VITREUS/CT
E12          0     1     VITRIC/CT

=> s cataract/obi
L11       6087 CATARACT/OBI

=> s 70-18-8 and 50-81-7
    *** REGIstRY INITIATED ***
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L13      78897 L12

    *** REGIstRY INITIATED ***
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L15      41636 L14

L16       4494 L15 AND L13

=> d his

     (FILE 'HOME' ENTERED AT 15:13:55 ON 21 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 15:14:19 ON 21 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:14:41 ON 21 JUL 2006
               E REDUCED GLUTATHIONE/CN
```

```
     FILE 'CAPLUS' ENTERED AT 15:14:41 ON 21 JUL 2006
               S E3

     FILE 'REGISTRY' ENTERED AT 15:14:47 ON 21 JUL 2006
L1             1 S E3/CN

     FILE 'CAPLUS' ENTERED AT 15:14:48 ON 21 JUL 2006
L2         41636 S L1
L3             1 S 70-18-8/THU AND DILLON J?/AU
L4             1 S US20040229814/PN
               SELECT L4 1 RN

     FILE 'REGISTRY' ENTERED AT 15:17:38 ON 21 JUL 2006
L5             4 S E1-E4
L6             1 S 50-81-7/RN
L7             1 S 7727-37-9/RN
L8             1 S 7782-44-7/RN
L9             0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8 AND 50-81-7
L10            0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8/RN

     FILE 'CAPLUS' ENTERED AT 15:27:46 ON 21 JUL 2006
               E VITREOUS REPLACEMENT/CT
L11         6087 S CATARACT/OBI
               S 70-18-8/REG# AND  50-81-7/REG#

     FILE 'REGISTRY' ENTERED AT 15:29:30 ON 21 JUL 2006
L12            1 S 50-81-7/RN

     FILE 'CAPLUS' ENTERED AT 15:29:31 ON 21 JUL 2006
L13        78897 S L12

     FILE 'REGISTRY' ENTERED AT 15:29:31 ON 21 JUL 2006
L14            1 S 70-18-8/RN

     FILE 'CAPLUS' ENTERED AT 15:29:32 ON 21 JUL 2006
L15        41636 S L14
L16         4494 S L15 AND L13

=> s l16 and l11
L17           77 L16 AND L11

=> d ti

L17  ANSWER 1 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Formulation for preventing and treating   ***cataract***  , degeneration
     of macula and other eye disease and its use


=> d ti

L17  ANSWER 1 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Formulation for preventing and treating   ***cataract***  , degeneration
     of macula and other eye disease and its use


=> d ti 1-5

L17  ANSWER 1 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Formulation for preventing and treating   ***cataract***  , degeneration
     of macula and other eye disease and its use

L17  ANSWER 2 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Methods and compositions for protecting against   ***cataract***
     development associated with vitrectomies

L17  ANSWER 3 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Protective effect of ascorbate against oxidative stress in the mouse lens

L17  ANSWER 4 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Dietary caloric restriction may delay the development of   ***cataract***
     by attenuating the oxidative stress in the lenses of Brown Norway rats
```

```
L17  ANSWER 5 OF 77  CAPLUS  COPYRIGHT 2006 ACS on STN
TI     ***Cataract***   formation in Atlantic salmon, Salmo salar L., smolt
     relative to dietary pro- and antioxidants and lipid level


=> d his

     (FILE 'HOME' ENTERED AT 15:13:55 ON 21 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 15:14:19 ON 21 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:14:41 ON 21 JUL 2006
               E REDUCED GLUTATHIONE/CN

     FILE 'CAPLUS' ENTERED AT 15:14:41 ON 21 JUL 2006
               S E3

     FILE 'REGISTRY' ENTERED AT 15:14:47 ON 21 JUL 2006
L1             1 S E3/CN

     FILE 'CAPLUS' ENTERED AT 15:14:48 ON 21 JUL 2006
L2         41636 S L1
L3             1 S 70-18-8/THU AND DILLON J?/AU
L4             1 S US20040229814/PN
               SELECT L4 1 RN

     FILE 'REGISTRY' ENTERED AT 15:17:38 ON 21 JUL 2006
L5             4 S E1-E4
L6             1 S 50-81-7/RN
L7             1 S 7727-37-9/RN
L8             1 S 7782-44-7/RN
L9             0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8 AND 50-81-7
L10            0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8/RN

     FILE 'CAPLUS' ENTERED AT 15:27:46 ON 21 JUL 2006
               E VITREOUS REPLACEMENT/CT
L11         6087 S CATARACT/OBI
               S 70-18-8/REG# AND  50-81-7/REG#

     FILE 'REGISTRY' ENTERED AT 15:29:30 ON 21 JUL 2006
L12            1 S 50-81-7/RN

     FILE 'CAPLUS' ENTERED AT 15:29:31 ON 21 JUL 2006
L13        78897 S L12

     FILE 'REGISTRY' ENTERED AT 15:29:31 ON 21 JUL 2006
L14            1 S 70-18-8/RN

     FILE 'CAPLUS' ENTERED AT 15:29:32 ON 21 JUL 2006
L15        41636 S L14
L16         4494 S L15 AND L13
L17           77 S L16 AND L11

=> s l17 not dillon j?/au
L18           75 L17 NOT DILLON J?/AU

=> s l18 not py>2002
L19           64 L18 NOT PY>2002

=> s l19 and vit?
L20           36 L19 AND VIT?

=> d l20 1-15 ibib abs

L20  ANSWER 1 OF 36  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2003:286284  CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER:          139:333032
TITLE:                    Protective effect of Co-SZ eye drop on galactose
                            ***cataract***   in rats
AUTHOR(S):                Qi, Mingxin; Huang, Xiurong; Wang, Zhaoyang; Wang,
                          Yong; Zheng, Liangpu; Lin, Jiumao; Lin, Wei; Ye,
                          Hongzhi
```

CORPORATE SOURCE: Department of Ophthalmology, the Second Affiliated Hospital, Fujian College of Traditional Chinese Medicine, Fuzhou, 350003, Peop. Rep. China
SOURCE: Zhongguo Bingli Shengli Zazhi (2002), 18(10), 1206-1208
CODEN: ZBSZEB; ISSN: 1000-4718
PUBLISHER: Jinan Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The effects of Co-SZ eye drop on galactose cataract were studied in rats. Based on folk remedy, SZ eye drop was made from leech, as a modified SZ eye drop, Co-SZ eye drop was enriched in Zinc and ***Vitamin*** C. The animal model of galactose cataract in SD rats was used. All animals were randomly divided into 3 groups: control group(using 0.9% NaCl instead of SZ and Co SZ), SZ group and Co-SZ group. Lens opacities were examd. dynamically in each groups via FS-3V slit-lamp microscope. Superoxide dismutase(SOD), glutathione peroxidase(GSH-Px), glutathione(GSH) and sol. protein(SP) in the lenses were measured in 15 days. Both the Co-SZ and SZ eye drops could significantly delay and alleviate galactose cataract in rats, with better effect of Co-SZ than SZ eye drop. The antioxidant index indicated that SOD, GSH-Px, GSH in Co-SZ and SZ group were significantly higher than that in control group. Furthermore, SOD, GSH-Px in Co-SZ group were higher than that in SZ group significantly. Co-SZ eye drops could significantly delay and alleviate galactose cataract in rats, the effect is much better than SZ eye drops. The different effect between SZ and Co-SZ eye drops could be raised from the different content of Zinc, which is involved in anti-oxidn.

L20 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:516601 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 137:83653
TITLE: Methods and compositions for treating ***cataracts*** using substances derived from yeast or saltbush with or without chromium
INVENTOR(S): Mirsky, Nitsa
PATENT ASSIGNEE(S): Natural Compounds Ltd., Israel
SOURCE: U.S., 25 pp., Cont.-in-part of U.S. 395,534.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6416794	B1	20020709	US 2000-617865	20000717
US 6261606	B1	20010717	US 1999-395534	19990914
PRIORITY APPLN. INFO.:			US 1999-395534 A2	19990914

AB Compns. and methods having anticataract and antiretinopathy activity comprise compds. extd. from natural resources including yeast and saltbush (Atriplex halimus) or synthetic chromium complexes. The compn. is administered orally, parenterally, topically or s.c. For example, the active fractions - GTF, isolated from yeast, and ACMS, isolated from saltbush - inhibited the activity of eye lens aldose reductase, an enzyme which plays an important role in the etiol. of diabetic cataract, by reducing the rate of NADPH oxidn.
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:405161 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 137:121656
TITLE: Studies on Singlet Oxygen Formation and UVA Light-mediated Photobleaching of the Yellow Chromophores in Human Lenses
AUTHOR(S): Ortwerth, Beryl J.; Chemoganskiy, Vitaliy; Olesen, P. R.
CORPORATE SOURCE: Mason Eye Institute, University of Missouri, Columbia, MO, 65212, USA
SOURCE: Experimental Eye Research (2002), 74(2), 217-229
CODEN: EXERA6; ISSN: 0014-4835
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal
LANGUAGE: English

AB The protein-bound chromophores, which increase with aging in the human lens, act as UVA sensitizers, producing almost exclusively singlet oxygen in ***vitro*** . Direct irradn. of whole, aged human lenses with high intensity UVA light (200 mW cm-2 for 24 h), however, failed to produce singlet oxygen damage, as evidenced by the lack of either His or Trp photodestruction. Total homogenates of human lenses prepd. in a cuvette under air did show destruction of His and Trp residues by UVA light, but no destruction was seen when equiv. homogenates were prepd. under argon. These data are consistent with the idea that the low oxygen levels in the lens prevent singlet oxygen damage in vivo. UVA irradn. of aged human lenses in culture caused an extensive photobleaching of the yellow chromophores. A time course indicated that the photobleaching increased with time, with significant color loss apparent after 6 h. Homogenization of the irradiated and dark control lenses in 6 M guanidine-HCl, followed by detn. of the difference spectrum, showed approx. 50% bleaching of compds. with a .lambda.max at 355 nm. Similarly, fluorophores with a .lambda.max for excitation of 355 nm and for emission of 420 nm were 50% destroyed by the UVA light. Similar results were obtained in ***vitro*** by the anaerobic irradn. of a sonication-solubilized WI fraction from type II brunescent cataracts and from aged human lenses. In this system, there was an initial bleaching of 15% after 30 min of irradn., followed by a slow increase over the next 6 h to a final bleaching of 30%. The addn. of 1.0 m M ascorbic acid, but not 1.0 m M glutathione (GSH), increased the photobleaching to 60% under argon, and the loss of ascorbate could be detected under these anaerobic conditions. In the presence of air, UVA light produced no photobleaching, but rather caused a three-fold increase in absorbance at 345 nm, which was prevented by the inclusion of 1.0 m M ascorbic acid and almost 50% inhibited by 1.0 m M GSH. The data are consistent with the conversion of the triplet state of the sensitizers to anion and cation radicals in the absence of oxygen. Photobleaching may occur either by dismutation of the anion radical or by redn. of the anion radical by ascorbate via type I chem. UVA irradn. of an enriched fraction of sensitizers from a proteolytic digest from type II cataract lenses produced a 63% bleaching at 330 nm in the absence of oxygen, and the almost complete loss of the A330 absorbing and 350/450 nm fluorescent peaks upon HPLC sepn. This loss correlated with the loss of the ability of the irradiated fraction to produce singlet oxygen in ***vitro*** upon subsequent UVA irradn.

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:534722 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 136:288996
TITLE: Schisandrin B protects against oxidative damage of lens in ***vitro***
AUTHOR(S): Huang, Xiurong; Qi, Mingxin; Ye, Hongzhi; Lin, Wei; Zheng, Liangpu; Lin, Jiumao
CORPORATE SOURCE: Fujian College of Traditional Chinese Medicine, Fuzhou, 350003, Peop. Rep. China
SOURCE: Zhongguo Yaoxue Zazhi (Beijing, China) (2001), 36(5), 310-313
CODEN: ZYZAEU; ISSN: 1001-2494
PUBLISHER: Zhongguo Yaoxue Zazhishe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The protective effect of schisandrin B on exptl. oxidative damage to lens was studied. Twenty New Zealand rabbits (40 eyes) were divided into four groups: control group, Fenton group (Fenton), pirenoxine sodium group (PS), and 0.5 mM schisandrin B group (Sch B). All fresh lenses except control group were bathed in Fenton reaction system composed of H2O2 and FeCl3 as a model of oxidative damage of lens, and treated with PS or Sch B in CO2 incubator for 24 h. The sol. protein (SP), superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), glutathione (GSH), ***vitamin*** C (***Vit*** C), and malondialdehyde (MDA) in homogenized lenses were measured. SP of lens in Sch B group was significantly higher than that in Fenton reaction system ($P < 0.01$), and activities of SOD and GSH-Px and levels of GSH and ***Vit*** C in lens of Sch B group were increased and MDA decreased as compared with the Fenton group. SOD activity, GSH, and ***Vit*** C in Sch B group were 1.66, 2.58, and 2.36 times those

of PS group, resp., but MDA in Sch B group was 24% lower than that in PS group (P <0.01). The results showed that Sch B may remarkably protect lens against oxidative damage in Fenton reaction system, the anti-oxidative effect of Sch B was better than that of PS, and Sch B may be used as a potential drug to prevent and treat cataract.

L20 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:191254 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 135:221217
TITLE: Experimental study on natural antioxidants protecting lens against oxidative injuries
AUTHOR(S): Huang, Xiurong; Qi, Mingxin; Ye, Hongzhi; Lin, Wei; Zheng, Liangpu; Lin, Jiumao
CORPORATE SOURCE: Fujian College of Traditional Chinese Medicine, Fuzhou, 350003, Peop. Rep. China
SOURCE: Zhongguo Bingli Shengli Zazhi (2001), 17(2), 120-123
CODEN: ZBSZEB; ISSN: 1000-4718
PUBLISHER: Jinan Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The protective effect of five natural antioxidants (schisandrin B, Sch B; silibinin, SIB; Pr gallate, PG; sodium ferulate, SF; total flavonoids of hippophase, TFH) on exptl. oxidative injuries of lens was studied. All fresh transparent lenses of rabbit eyes except control group were bathed in Fenton reaction system to produce a model of oxidative damages of lens, meanwhile Sch B, SIB, PG, SF, TFH and pirenoxine sodium (PS) were added in the reaction system in different groups resp. Lenses were incubated for 24 h. Then total protein (TP), sol. protein (SP), superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), glutathione, ***vitamin*** C (***Vit*** C), total activities of anti-oxidn. (TAO) and malondialdehyde (MDA) in homogenized lenses were measured to observe the effects of five antioxidants on above index. Five antioxidants increased the anti-oxidative index and decreased MDA in lenses of oxidative damages in different levels, the effects are better than that of PS, esp. in group SF and Sch B. The five natural antioxidants protected lens against exptl. oxidative injuries very well. There are wide prospects to pursue effective anti-cataract drugs from natural antioxidants.

L20 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:182802 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 135:135325
TITLE: Free radicals and antioxidants in ophthalmology
AUTHOR(S): Racek, J.; Holecek, V.; Ricarova, R.
CORPORATE SOURCE: Ostav klinicke biochemie a laboratorni diagnostiky, Lekarska Fakulta Univerzity Karlovy fakultni nemocine, Plzen, Czech.
SOURCE: Klinicka Biochemie a Metabolismus (2001), 9(1), 20-24
CODEN: KBMEFQ; ISSN: 1210-7921
PUBLISHER: Ceska Lekarska Spolecnost J. Ev. Purkyne
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Czech
AB A review, with 30 refs. Oxygen, various chem. substances and UV rays exert a direct action on the eye and can cause the formation of free radicals in the eye. Therefore the antioxidant content of the eye is high. In ***vitreous*** fluid and the ***vitreous*** body it is in particular ascorbic acid, the lens contains a considerable amt. of reduced glutathione; the activity of antioxidant enzymes in different structures of the eye is also high. The most frequent and most serious eye diseases involving of free radicals are in particular cataract, retinopathies of different origin and mol. degeneration. The authors describe in the submitted review the possible mechanism of the development of these diseases with regard to metabolic processes generating free radicals and the part played by antioxidants in the protection of the eye and prevention of its damage by free radicals.

L20 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:52845 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 135:87118
TITLE: Inhibition of experimental oxidative damages of lens by sodium ferulate
AUTHOR(S): Huang, Xiu-Rong; Qi, Ming-Xin; Ye, Hong-Zhi; Lin, Wei; Zheng, Liang-Pu; Lin, Jiu-Mao

CORPORATE SOURCE: Central Laboratory, Fujian College of Traditional Chinese Medicine, Futzhou, 350003, Peop. Rep. China
SOURCE: Zhongguo Yaolixue Yu Dulixue Zazhi (2000), 14(6), 430-433
CODEN: ZYYZEW; ISSN: 1000-3002
PUBLISHER: Zhongguo Yaolixue Yu Dulixue Zazhi Biarjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB To investigate the inhibition of exptl. oxidative damages of lens by sodium ferulate, 20 New Zealand rabbits (40 eyes) were divided randomly into four groups: control group, Fenton group (Fenton), pirenoxine sodium group (PS), and sodium ferulate group (SF). Eyeballs were extd. under the condition of sterility immediately. Lenses were drawn, bathed in different media of above groups and incubated in CO2 incubator for 24 h. Sol. protein (SP), superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), glutathione (GSH), ***vitamin*** C (***Vit*** C) and malondialdehyde (MDA) in homogenized lenses were measured. The results showed that SP, SOD, GSH-Px, GSH, ***Vit*** C of SF group were higher than those in Fenton and PS groups; MDA of SF group was lower than that in Fenton and PS groups. The results indicate that SF inhibits exptl. oxidative damages of lens, and it is more effective than PS. The study provides a scientific basis to prevent and treat cataract by using SF as a drug.

L20 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:568528 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 133:168395
TITLE: Orally ingested compositions for prevention and treatment of age-related eye disorders
INVENTOR(S): Gorsek, Wayne F.
PATENT ASSIGNEE(S): Vitacost Inc., USA
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6103756	A	20000815	US 1999-372055	19990811
PRIORITY APPLN. INFO.:			US 1999-372055	19990811

AB Disclosed is an oral compn. for prevention, stabilization, reversal and treatment of age-related macular degeneration, cataracts, elevated ocular pressure, diabetic retinopathy and glaucoma. One claimed compn. comprises ***vitamin*** C 100-600 mg, ***vitamin*** E 100-2000 IU, ***vitamin*** A 100-2000 IU, taurine 100-1000 mg, selenium 50-600 .mu.g, Bilberry ext. 40-1000 mg, lutein 6-100 mg, lycopene 6-100 mg, .alpha.-lipoic acid 50-1000 mg, quercetin 10-1000 mg, rutin 10-1000 mg, and citrus bioflavonoids 10-1000 mg.
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:180661 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 133:72363
TITLE: Relationship between oxidative stress and galactose-induced ***cataract***
AUTHOR(S): Han, Xiuxian; Chen, Jimin; Wang, Xiang; Chen, Zhuji; Deng, Xinguo; Ding, Xingzhen; Pang, Yingrin; Tian, Xiaoli; Zhou, Quan; Jin, Weimin; Li, Jianxin
CORPORATE SOURCE: Henan Inst. Ophthalmology, Zhengzhou, 450003, Peop. Rep. China
SOURCE: Yanke Yanjiu (1999), 17(1), 34-37
CODEN: YAYAFH; ISSN: 1003-0808
PUBLISHER: Henansheng Yanke Yanjiuso
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Objective To det. whether oxidative stress damage may be involved in galactose-induced cataract in vivo and in ***vitro*** . Methods A model of galactose-induced cataract in SD rat was established by injecting 50% galactose(15 g/kg/d). An in ***vitro*** model was established by

incubation of lenses in an oxygen free radical generation system. The levels of MDA, SOD, GSH-px, CAT, GSH, ***Vitamin*** E and C were examd. Results We obsd. the morphol. and pathol. of lens opacity over time. The changes developed as follows: precystic-vesicle, cystic-vesicle, fusion cystic-vesicles and cortical stage. In lenses of the animal model, the MDA was significantly increased 2.5 fold, but GSH, SOD, and water sol. protein were decreased by 30%, 59% and 20%, resp. In incubated lenses,the MDA was also significantly increased 3.6 fold, but GSH, SOD GSH-PX, CAT, ***Vitamin*** E and C were decreased by 80% ,25%, 60%, 61%, 78% and 61%, resp. Conclusion It is important to det. the pathogenesis of galactose-induced cataract;osmotic damage and oxidative stress appear to be involved.

L20 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:558221 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 131:335320
TITLE: Modelling cortical ctaractogenesis. 21: In diabetic rat lenses taurine supplementation partially reduces damage resulting from osmotic compensation leading to osmolyte loss and antioxidant depletion
AUTHOR(S): Mitton, K. P.; Linklater, H. A.; Dzialoszynski, T.; Sanford, S. E.; Starkey, K.; Trevithick, J. R.
CORPORATE SOURCE: Department of Biochemistry, Faculty of Medicine and Dentistry, University of Western Ontario, London, ON, N6A 5C1, Can.
SOURCE: Experimental Eye Research (1999), 69(3), 279-289
CODEN: EXERA6; ISSN: 0014-4835
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The concn. of taurine and the amino acids, glutathione, cysteine, ascorbate and ATP were detd. in the lenses of rats made diabetic with streptozotocin. In the clear lenses, prior to vacuole formation after 1 or 2 wk of diabetes, the increase in concn. of sorbitol and the total decrease of all these osmolytes were not significantly different. The major components of the osmolytes lost were taurine and amino acids, which together accounted for over 75% of the total osmolyte loss. Since glutathione, ascorbate, taurine and cysteine have been reported to have antioxidant activity, it appears that their loss may potentiate damage occurring as a result of free radicals generated by nonenzymic glycation by the Maillard reaction. Amino acids also lost as a result of the osmotic compensation, are estd. to be responsible for almost half of the antioxidant activity lost. To test this hypothesis, normal and streptozotocin diabetic female Wistar rats were given taurine at 0.05% or 0.10% (wt./wt.) in the diet. This treatment resulted in small only marginally significant increases in serum taurine levels. At the end of 6 wk the rats were examd. for wt. gain or loss and at the time of killing, blood was collected for measurement of serum glucose. .gamma.-Crystallin levels were detd. in ***vitreous*** and aq. humors using a RIA. A lens from each rat was homogenized in 8 m guanidinium chloride for ATP anal. In normal rats, a small amt. of .gamma.-crystallin was found in the ***vitreous*** humor, and an even smaller amt. in the aq. humor. Diabetes caused a 4- to 5-fold increase in the ***vitreous*** humor and a 4-fold increase in .gamma.-crystallin in the aq. humor. Diabetes also led to a significant worsening in general body condition, loss of body wt., formation of cataracts, and decrease in lens ATP levels. Addn. of taurine to the diet of diabetic animals resulted in a significant decrease of .gamma.-crystallin leakage into the ***vitreous*** but not the aq. humor. Taurine had no effect on the lens ATP levels. Neither streptozotocin diabetes nor taurine in the diet appeared to affect the wt. of the lenses. (c) 1999 Academic Press.
REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:52834 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 130:208307
TITLE: Contributions of polyol pathway to oxidative stress in diabetic ***cataract***
AUTHOR(S): Lee, Alan Y. W.; Chung, Stephen S. M.
CORPORATE SOURCE: Institute of Molecular Biology, University of Hong Kong, Hong Kong, Peop. Rep. China

SOURCE: FASEB Journal (1999), 13(1), 23-30
CODEN: FAJOEC; ISSN: 0892-6638
PUBLISHER: Federation of American Societies for Experimental Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB There is strong evidence to show that diabetes is assocd. with increased oxidative stress. The source of this oxidative stress remains unclear. Using transgenic mice that overexpress aldose reductase (AR) in their lenses, the authors found that the flux of glucose through the polyol pathway is the major cause of hyperglycemic oxidative stress in this tissue. The substantial decrease in the level of reduced glutathione (GSH) with concomitant rise in the level of lipid peroxidn. product malondialdehyde (MDA) in the lens of transgenic mice, but not in the nontransgenic mice, suggests that glucose autoxidn. and nonenzymic glycation do not contribute to oxidative stress in diabetic lenses. AR redn. of glucose to sorbitol probably contributes to oxidative stress by depleting its cofactor NADPH, which is also required for the regeneration of GSH. Sorbitol dehydrogenase, the 2nd enzyme in the polyol pathway that converts sorbitol to fructose, also contributes to oxidative stress, most likely because depletion of its cofactor NAD+ leads to more glucose being channeled through the polyol pathway. Despite a >100% increase of MDA, oxidative stress plays only a minor role in the development of cataract in this acute diabetic cataract model. Chronic oxidative stress generated by the polyol pathway is likely to be an important contributing factor in the slow-developing diabetic cataract as well as in the development of other diabetic complications.

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:618371 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 129:255004
TITLE: Prophylactic and therapeutic methods for ocular degenerative diseases and inflammations, and histidine compositions therefor
INVENTOR(S): Thomas, Peter G.
PATENT ASSIGNEE(S): Cytos Pharmaceuticals LLC, USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5811446	A	19980922	US 1997-839805	19970418
WO 9847366	A1	19981029	WO 1998-US7319	19980417
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9873583	A1	19981113	AU 1998-73583	19980417
PRIORITY APPLN. INFO.:			US 1997-839805 A	19970418
			WO 1998-US7319 W	19980417

AB Methods are provided for protecting the eye from degenerative eye conditions by administering prophylactic histidine compns. Also provided are for treating ocular inflammation resulting from various causative agents, by administering therapeutic histidine compns. Further provided are histidine compns. for carrying out the methods.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:608534 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 129:225723
TITLE: The use of heme-peptides to prevent or retard disease

associated with oxidative stress
INVENTOR(S): Spector, Abraham; Ma, Wanchao; Wang, Ren-Rong
PATENT ASSIGNEE(S): The Trustees of Columbia University in the City of New York, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9837908	A1	19980903	WO 1998-US3857	19980227
W: AU, CA, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6013623	A	20000111	US 1997-807482	19970227
AU 9864424	A1	19980918	AU 1998-64424	19980227
PRIORITY APPLN. INFO.:			US 1997-807482	A2 19970227
			WO 1998-US3857	W 19980227

AB A method for treating a condition assocd. with oxidative stress in a subject comprises administering an effective amt. of a heme-peptide. The subject may be a mammal. The mammal may be a human being. The condition assocd. with oxidative stress may be an inflammatory condition, an allergic condition or an auto-immune condition.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:206249 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 128:280319
TITLE: UVA irradiation of human lens proteins produces residual oxidation of ascorbic acid even in the presence of high levels of glutathione
AUTHOR(S): Ortwerth, Beryl J.; Coots, Amy; James, Hongying L.; Linetsky, Mikhail
CORPORATE SOURCE: Mason Eye Institute, University of Missouri, Columbia, MO, 65212, USA
SOURCE: Archives of Biochemistry and Biophysics (1998), 351(2), 189-196
CODEN: ABBIA4; ISSN: 0003-9861
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The oxidn. products of ascorbic acid (AscH-) can rapidly glycate and crosslink lens proteins in ***vitro*** , producing fluorophores and browning products similar to those present in cataractous lenses. The accumulation of AscH- oxidn. products, however, would largely be prevented by the millimolar levels of glutathione (GSH) present in human lens. Here we investigate whether protein aggregation could allow the oxidn. of AscH- by UVA-induced reactive oxygen species in the presence of physiol. levels of GSH. The metal-catalyzed oxidn. of 1.0 mM AscH- by 50 .mu.M Cu(II) was almost complete after 1 h, but no oxidn. was seen in the presence of GSH concns. as low as 0.5 mM. UVA irradn. of protein aggregates from human lens, which accumulated more than 2.0 mM singlet oxygen after 1 h, caused a 50-60% oxidn. of 1.0 mM AscH-. The addn. of 2-4 mM GSH, however, decreased AscH- oxidn. by less than half, and 30% of the AscH- was oxidized even in the presence of 15 mM GSH. This diminished protection may be due, in part, to the ability of AscH-, but not GSH, to penetrate to the sites of singlet oxygen generation located within the protein. Consistent with this hypothesis, greater GSH protection was seen when a proteolytic digest of the human proteins was subjected to the same irradn. or when singlet oxygen was chem. generated from 3-(4-methyl-1-naphthyl)propionic acid endoperoxide (MNPAE) at 37.degree.C in the medium. The addn. of 50 .mu.M Cu(II) had no effect on the rate of degrdn. of dehydroascorbic acid (DHA). Singlet oxygen, either UVA- or MNPAE-generated, increased the rate of DHA loss. This secondary oxidn. of DHA by singlet oxygen would allow the accumulation of AscH- oxidn. products not reducible by GSH. Therefore, the data presented here argue that the protein aggregation seen in older human lenses may permit oxidized AscH--induced crosslinking to occur even at physiol. GSH levels.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:608376 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 127:272771
TITLE: Progression of mouse buthionine sulfoximine ***cataracts*** in ***vitro*** is inhibited by thiols or ascorbate
AUTHOR(S): Calvin, Harold I.; Zhu, Guan-Ping; Wu, Jun-Xi; Banerjee, Urmi; Fu, S. -C. Joseph
CORPORATE SOURCE: Department of Ophthalmology and Department of Biochemistry and Molecular Biology, UMDNJ-New Jersey Medical School, Newark, NJ, 07103, USA
SOURCE: Experimental Eye Research (1997), 65(3), 341-347
CODEN: EXERA6; ISSN: 0014-4835
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Mouse lens cultures were employed to study the progression of cataracts initiated by injection of buthionine sulfoximine, an inhibitor of glutathione (GSH) biosynthesis. Culture of lenses removed from untreated mice on postnatal day 7, for 48 h in the presence of 4 mM BSO, resulted in only limited cataractous changes. To enable substantial progression of cataracts in ***vitro*** , it was therefore necessary to pretreat the mice with BSO prior to lens culture. A single injection of BSO (4 nmol mg-1 lens), administered on day 7, resulted in > 90% depletion of lens GSH within 3 days, but no visible cataractous changes. The clear lenses were incubated for 29 h at 37.degree. in Medium HL-1, supplemented with EGF, insulin and Ca2+, in the presence or absence of BSO, and were scored for cataract development by previously described criteria. In the absence of BSO, only 4 of 10 lenses developed large opacities. However, in the presence of 4 mM BSO, 40 out of 45 exptl. lenses developed opacities affecting at least 50% of the lens visual field and were scored as stages 1C-4, depending upon the extent and d. of the cataracts. In addn., three lenses had opacities involving 20-50% of the field (stage 1B). By contrast, less than 10% of lenses from untreated mice incubated in the absence of BSO developed opacities. The cataracts developed in 4 mM BSO were accompanied by redn. of lens glutathione levels to < 0.010 nmol mg-1 lens. They were almost completely prevented by 1 mM ascorbate, 2 mM GSH, 2 mM GSH monoethyl ester and 2 mM cysteamine. GSH and GSH ester maintained lens glutathione content between 0.1 and 0.2 nmol mg-1 in the presence of BSO, whereas ascorbate did not prevent near-total GSH depletion. The prevention of cataracts by thiols and ascorbate was confirmed by lens Na/K ratios not significantly different from those in control lenses. The above combination of GSH depletion in vivo by a single injection of BSO, followed 3 days later with lens culture in the presence of BSO, may yield a useful system to elucidate and control the biochem. mechanisms involved in oxidative cataract induction by this GSH-depleting agent.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file his
'HIS' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'CAPLUS'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

=> d his

(FILE 'HOME' ENTERED AT 15:13:55 ON 21 JUL 2006)

FILE 'CAPLUS' ENTERED AT 15:14:19 ON 21 JUL 2006

FILE 'REGISTRY' ENTERED AT 15:14:41 ON 21 JUL 2006
E REDUCED GLUTATHIONE/CN

FILE 'CAPLUS' ENTERED AT 15:14:41 ON 21 JUL 2006
S E3

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     FILE 'REGISTRY' ENTERED AT 15:14:47 ON 21 JUL 2006
L1             1 S E3/CN

     FILE 'CAPLUS' ENTERED AT 15:14:48 ON 21 JUL 2006
L2         41636 S L1
L3             1 S 70-18-8/THU AND DILLON J?/AU
L4             1 S US20040229814/PN
                 SELECT L4 1 RN

     FILE 'REGISTRY' ENTERED AT 15:17:38 ON 21 JUL 2006
L5             4 S E1-E4
L6             1 S 50-81-7/RN
L7             1 S 7727-37-9/RN
L8             1 S 7782-44-7/RN
L9             0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8 AND 50-81-7
L10            0 S (VITREOUS(A)REPLACEMENT) AND 70-18-8/RN

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                 E VITREOUS REPLACEMENT/CT
L11         6087 S CATARACT/OBI
                 S 70-18-8/REG# AND  50-81-7/REG#

     FILE 'REGISTRY' ENTERED AT 15:29:30 ON 21 JUL 2006
L12            1 S 50-81-7/RN

     FILE 'CAPLUS' ENTERED AT 15:29:31 ON 21 JUL 2006
L13        78897 S L12

     FILE 'REGISTRY' ENTERED AT 15:29:31 ON 21 JUL 2006
L14            1 S 70-18-8/RN

     FILE 'CAPLUS' ENTERED AT 15:29:32 ON 21 JUL 2006
L15        41636 S L14
L16         4494 S L15 AND L13
L17           77 S L16 AND L11
L18           75 S L17 NOT DILLON J?/AU
L19           64 S L18 NOT PY>2002
L20           36 S L19 AND VIT?

=> s l20 and vitrectom?
L21            0 L20 AND VITRECTOM?

=> d l20 15-30 ibib abs

L20  ANSWER 15 OF 36  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        1997:608376  CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER:         127:272771
TITLE:                   Progression of mouse buthionine sulfoximine
                           ***cataracts***   in   ***vitro***   is inhibited by
                         thiols or ascorbate
AUTHOR(S):               Calvin, Harold I.; Zhu, Guan-Ping; Wu, Jun-Xi;
                         Banerjee, Urmi; Fu, S. -C. Joseph
CORPORATE SOURCE:        Department of Ophthalmology and Department of
                         Biochemistry and Molecular Biology, UMDNJ-New Jersey
                         Medical School, Newark, NJ, 07103, USA
SOURCE:                  Experimental Eye Research (1997), 65(3), 341-347
                         CODEN: EXERA6; ISSN: 0014-4835
PUBLISHER:               Academic
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   Mouse lens cultures were employed to study the progression of cataracts
     initiated by injection of buthionine sulfoximine, an inhibitor of
     glutathione (GSH) biosynthesis.  Culture of lenses removed from untreated
     mice on postnatal day 7, for 48 h in the presence of 4 mM BSO, resulted in
     only limited cataractous changes.  To enable substantial progression of
     cataracts in   ***vitro***  , it was therefore necessary to pretreat the
     mice with BSO prior to lens culture.  A single injection of BSO (4 nmol
     mg-1 lens), administered on day 7, resulted in > 90% depletion of lens GSH
     within 3 days, but no visible cataractous changes.  The clear lenses were
     incubated for 29 h at 37.degree. in Medium HL-1, supplemented with EGF,
     insulin and Ca2+, in the presence or absence of BSO, and were scored for
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cataract development by previously described criteria. In the absence of BSO, only 4 of 10 lenses developed large opacities. However, in the presence of 4 mM BSO, 40 out of 45 exptl. lenses developed opacities affecting at least 50% of the lens visual field and were scored as stages 1C-4, depending upon the extent and d. of the cataracts. In addn., three lenses had opacities involving 20-50% of the field (stage 1B). By contrast, less than 10% of lenses from untreated mice incubated in the absence of BSO developed opacities. The cataracts developed in 4 mM BSO were accompanied by redn. of lens glutathione levels to < 0.010 nmol mg-1 lens. They were almost completely prevented by 1 mM ascorbate, 2 mM GSH, 2 mM GSH monoethyl ester and 2 mM cysteamine. GSH and GSH ester maintained lens glutathione content between 0.1 and 0.2 nmol mg-1 in the presence of BSO, whereas ascorbate did not prevent near-total GSH depletion. The prevention of cataracts by thiols and ascorbate was confirmed by lens Na/K ratios not significantly different from those in control lenses. The above combination of GSH depletion in vivo by a single injection of BSO, followed 3 days later with lens culture in the presence of BSO, may yield a useful system to elucidate and control the biochem. mechanisms involved in oxidative cataract induction by this GSH-depleting agent.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:242279 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 124:307535
TITLE: Stereospecific effects of R-lipoic acid on buthionine sulfoximine-induced ***cataract*** formation in newborn rats
AUTHOR(S): Maitra, Indrani; Serbinova, Elena; Tritscheler, Hans; Packer, Lester
CORPORATE SOURCE: Dep. Molecular and Cell Biol., Univ. California, Berkeley, CA, 94720-3200, USA
SOURCE: Biochemical and Biophysical Research Communications (1996), 221(2), 422-9
CODEN: BBRCA9; ISSN: 0006-291X
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This study revealed a marked stereospecificity in the prevention of buthionine sulfoximine-induced cataract, and in the protection of lens antioxidants, in newborn rats by .alpha.-lipoate. R- and racemic .alpha.-lipoate decreased cataract formation from 100% (buthionine sulfoximine only) to 55% (buthionine sulfoximine + R-.alpha.-lipoic acid) and 40% (buthionine sulfoximine + rac-.alpha.-lipoic acid) ($p < 0.05$ compared to buthionine sulfoximine only). S-.alpha.-lipoic acid had no effect on cataract formation induced by buthionine sulfoximine. The lens antioxidants glutathione, ascorbate, and ***vitamin*** E were depleted to 45, 62, and 23% of control levels, resp., by buthionine sulfoximine treatment, but were maintained at 84-97% of control levels when R-.alpha.-lipoic acid or rac-.alpha.-lipoic acid were administered with buthionine sulfoximine; S-.alpha.-lipoic acid administration had no protective effect on lens antioxidants. When enantiomers of .alpha.-lipoic acid were administered to animals, R-.alpha.-lipoic acid was taken up by lens and reached concns. 2- to 7-fold greater than those of S-.alpha.-lipoic acid, with rac-.alpha.-lipoic acid reaching levels midway between the R-isomer and racemic form. Reduced lipoic acid, dihydrolipoic acid, reached the highest levels in lens of the rac-.alpha.-lipoic acid-treated animals and the lowest levels in S-.alpha.-lipoic acid-treated animals. These results indicate that the protective effects of .alpha.-lipoic acid against buthionine sulfoximine-induced cataract are probably due to its protective effects on lens antioxidants, and that the stereospecificity exhibited is due to selective uptake and redn. of R-.alpha.-lipoic acid by lens cells.

L20 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:83797 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 124:194229
TITLE: Effect of selected anti- ***cataract*** agents on opacification in the selenite ***cataract*** model
AUTHOR(S): Hiraoka, T.; Clark, J. I.; Li, X. Y.; Thurston, G. M.
CORPORATE SOURCE: Dep. Biol. Structure, Univ. Washington, Seattle, WA,

98195, USA
SOURCE: Experimental Eye Research (1996), 62(1), 11-19
CODEN: EXERA6; ISSN: 0014-4835
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A systematic study of the anti-cataract activity of 14 reagents was conducted using the selenite model. The reagents or their derivs. were identified from literature reports of their potential effectiveness against cataract formation. The effects of each reagent were measured on the phase sepn. temp., Tc, of lens homogenate in ***vitro*** . Tc is a direct measure of mol. interaction leading to protein aggregation. The protective effect of a single s.c. injection of each reagent [at a dose of 1.5 mmol/kg body wt.] on lens opacification was evaluated in vivo using rats administered selenite [at a dose of 19 .mu.mol/kg body wt.] to initiate cataract formation. The strongest effects on lens opacification in vivo were obsd. with reagents having the strongest effect on Tc, in ***vitro*** . The weakest effects in vivo were obsd. with the reagents having the weakest effect on Tc, in ***vitro*** . The results were suggestive of a relation between the effect of reagent on Tc and protection against cataract formation in vivo.

L20 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:932639 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 124:49578
TITLE: Morphological and biochemical changes in lenses of guinea pigs after ***vitamin*** -C-deficient diet and UV-B radiation
AUTHOR(S): Malik, A.; Kojima, M.; Sasaki, K.
CORPORATE SOURCE: Faculty Medicine, University Andalas, Padang, Indonesia
SOURCE: Ophthalmic Research (1995), 27(4), 189-96
CODEN: OPRSAQ; ISSN: 0030-3747
PUBLISHER: Karger
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of UV B (UV-B) radiation and a ***vitamin*** -C-deficient (VCD) diet on guinea pig lenses was investigated. The initial lens changes in the VCD group were obsd. by slit-lamp examn. 6 wk after the start of the VCD treatment; after 12 wk the changes in the posterior subcapsular region became more prominent, and the dissocn. around the posterior suture became wider and slightly deeper toward the posterior cortex. The high concn. of lens oxidized glutathione (GSSG), and the low ratio of reduced glutathione (GSH) to oxidized glutathione (GSH/GSSG) on the lens posterior region correlated with d. changes in the corresponding layers as measured by Scheimpflug images with linear microdensitometry. It is suggested that the strong oxidative stress of the VCD diet caused the damage at the posterior part of the lens. UV-B radiation appeared to accelerate cataract progression in lenses that lack ***vitamin*** C.

L20 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:771303 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 123:246741
TITLE: Biochemical changes in lens, aqueous humor and ***vitreous*** body and effects of aldose reductase inhibitor (TAT) on rats with experimental diabetes
AUTHOR(S): Saito, Hitoko
CORPORATE SOURCE: Dep. Ophthalmol., Nippon Med. Sch., Tokyo, 113, Japan
SOURCE: Nippon Ika Daigaku Zasshi (1995), 62(4), 339-50
CODEN: NIDZAJ; ISSN: 0048-0444
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB We measured the levels of antioxidants (glutathione, ascorbic acid) and lipid peroxide (malondialdehyde) in lens, aq. humor and ***vitreous*** body of rats with galactose cataract and streptozotocin cataract. Furthermore we studied the effects of aldose reductase inhibitor (TAT) on these levels. In streptozotocin diabetes rats, the increased malondialdehyde levels in lens, aq. humor and serum were suppressed by TAT administration. In galactose and streptozotocin diabetes rats, the decreased levels of glutathione and ascorbic acid were suppressed by TAT administration.

L20 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:372990 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 122:211148
TITLE: Participation of oxidative damage in cataractogenesis in WBN/Kob rats with spontaneously, late developed diabetes mellitus
AUTHOR(S): Goto, Hajime; Okada, Hiroshi; Hattori, Hiroyuki; Majima, Yoshinao; Ohta, Yoshiji; Ishiguro, Isao
CORPORATE SOURCE: Sch. Med., Fujita Health Univ., Toyoake, 470-11, Japan
SOURCE: Atarashii Ganka (1995), 12(1), 103-8
CODEN: ATGAEX; ISSN: 0910-1810
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB We examd. the relation between severity of cataract and lenticular glycated protein, lipid peroxide (LPO), ***vitamin*** E (VE), reduced glutathione (GSH), and ascorbic acid (AA) levels, as well as superoxide dismutase (SOD) activity, in male diabetic WBN/Kob rats (22-mo-old). In the lenses of diabetic rats without cataract, increased glycated protein and LPO contents and decreased AA content were found. In the lenses of diabetic rats with cataract, increased VE content and decreased GSH content and SOD activity occurred in addn. to the increased glycated protein and LPO contents and decreased AA content. These changes were enhanced in diabetic rats with advanced cataract. In diabetic rats with and without cataract, the levels of blood sugar, serum insulin, and glycated protein were similar. In the serum of these diabetic rats, increased LPO and VE levels and decreased AA level were almost equal. These results indicate that oxidative damage participates in cataractogenesis in WBN/Kob rats with spontaneously, late developed diabetes mellitus.

L20 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:219383 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 122:53130
TITLE: Relationship between cataractogenesis and oxidative damage in WBN/Kob rats with spontaneously late-developed diabetes mellitus
AUTHOR(S): Goto, Hajime; Okada, Hiroshi; Hattori, Hiroyuki; Majima, Yoshinao; Ohta, Yoshiji; Ishiguro, Isao
CORPORATE SOURCE: Sch. Med., Fujita Health Univ., Toyoake, 470-11, Japan
SOURCE: Atarashii Ganka (1994), 11(10), 1599-603
CODEN: ATGAEX; ISSN: 0910-1810
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB To clarify the role of oxidative damage in cataractogenesis in diabetic persons of middle or advanced age, we examd. the relationship between cataractogenesis and oxidative damage in WBN/Kob rats with spontaneously late developed diabetes mellitus. Male WBN/Kob rats (17 mo old), with diabetes and cortical cataract, and age-matched male Wistar rats, without diabetes or cataract, were used as exptl. and control groups, resp. Cataractous lenses in the exptl. group contained 2.5 fold the amt. of glycated protein found in the clear lenses of the control group. Lipid peroxide content in the cataractous lenses of the exptl. group was significantly higher than in the clear lenses of the control group, while reduced glutathione, ascorbic acid, and ***vitamin*** E contents in the former were significantly lower than in the latter. These results suggest a close relationship between cataractogenesis and oxidative damage in WBN/Kob rats with spontaneously late developed diabetes mellitus.

L20 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:37067 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 118:37067
TITLE: The analysis of ***vitamin*** C, glutathione, and lipid peroxides in senile ***cataract*** lens
AUTHOR(S): Wu, Xiangyun; Hu, Xiaoyan; Li, Han; Xu, Songde
CORPORATE SOURCE: Dep. Biochem., Shandong Med. Univ., Jinan, Peop. Rep. China
SOURCE: Shandong Yike Daxue Xuebao (1992), 30(2), 147-8
CODEN: SYXBEE; ISSN: 1000-0496
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The level of ***vitamin*** C, GSH, and lipid peroxide in 20 cases of senile cataract lens and 5 cases of noncataract lens were analyzed. The

levels of ***vitamin*** C and GSH were decreased and the level of lipid peroxides was increased in the senile cataract lens. The effect of the oxidant and antioxidant might be involved in the formation of senile cataract. It suggested that there may be some relationship between the content of ***vitamin*** C, G-SH and lipid peroxides of the lens and the pathogenesis of the senile cataract.

L20 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:91439 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 116:91439
TITLE: Composition and method for treatment of macular degeneration
INVENTOR(S): Lahaye, Peter G.; Olson, Randall J.
PATENT ASSIGNEE(S): Lahaye Laboratories, Inc., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5075116	A	19911224	US 1989-341025	19890420
US 5156852	A	19921020	US 1991-761694	19910918
PRIORITY APPLN. INFO.:			US 1989-341025	A2 19890420

AB Oral pharmaceutical compns. for treatment of eye diseases such as macular degeneration are disclosed. The compns. contain ***vitamin*** C and E, Zn, Cu, Se, Mn, and at least one of L-cysteine, pyridoxine, and riboflavin. The ***vitamins*** C and E serve as antioxidants, while Zn, Cu, Se, and Mn serve as cofactors for metalloenzymes which scavenge oxidizers. The remaining three compds. tend to enhance glutathione concn. All the elements are provided in a tablet and taken 4 tablets twice a day (no data).

L20 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:464712 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 115:64712
TITLE: Desferal-manganese(III) in the therapy of diquat-induced ***cataract*** in rabbit
AUTHOR(S): Bhuyan, Kailash C.; Bhuyan, Durga K.; Chiu, William; Malik, Sajid; Fridovich, Irwin
CORPORATE SOURCE: Dep. Ophthalmol., Mt. Sinai Sch. Med., New York, NY, 10029, USA
SOURCE: Archives of Biochemistry and Biophysics (1991), 288(2), 525-32
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In rabbit eye lenses subjected to oxidative stress induced by 1 mM diquat in ***vitro*** , there were 7-10-fold increases in malondialdehyde, conjugated dienes, and carbonyl dienes, indicating extensive peroxidn. of cellular membrane lipids, and .apprx.60% decrease in reduced glutathione. In the presence of 0.1-5 mM desferal-Mn(III) these changes were diminished by 50-70%. In rabbits having diquat-induced cataract, 5% desferal-Mn(III) applied topically four times a day and a single i.p. dose of 64 mg/kg daily for 5 wk (including pretreatment for 1 wk) retarded the progression of lens opacities, whereas in control rabbits cataract progressed to an advanced grade. Desferal-Mn(III) also diminished prodn. of superoxide and hydroxyl radicals in the lens, aq. humor, and ***vitreous*** humor, and of H2O2 in the aq. humor and ***vitreous*** humor. It also suppressed lipid peroxidn. and oxidn. of protein-SH of the lens and restored lenticular glutathione and ascorbate to normal levels.

L20 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:5633 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 112:5633
TITLE: Chromium-51 release and oxidative stress in the lens
AUTHOR(S): Stewart-DeHaan, P. J.; Sanwal, M.; Creighton, M. O.; Inch, W. R.; Trevithick, J. R.
CORPORATE SOURCE: Dep. Biochem., Univ. West. Ontario, London, ON, N6A 5C1, Can.

SOURCE: Lens and Eye Toxicity Research (1989), 6(1-2), 183-202
CODEN: LETRET; ISSN: 1042-6922
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Examn. of the opaque areas of human cortical cataracts has shown that a large portion of the opacity could be attributed to the globules found there. Models were tested which featured globule formation as a result of oxidative damage to cultured rat lens cells and whole chick embryo lenses. When cell monolayers from a lens cell line were exposed to oxidizing conditions they developed globules on the cell surface. The cells were protected from damage by the addn. of glutathione and ***vitamin*** C. Lenses of 13-day-old chick embryos were also incubated in oxidizing conditions and the amt. of cellular damage was assessed using a chromium-51 release assay. After 24 h the amt. of 51Cr in the medium increased by 20% as a result of 10 mM hydrogen peroxide treatment. The addn. of 10 mM ***vitamin*** C to the hydrogen peroxide reduced the 51Cr leakage to the control level. Light microscopy of sections of the lens showed a breakdown of the equatorial fiber arrangement in the presence of H2O2, while addn. of ***vitamin*** C restored the fiber organization to almost normal. Oxidative stress may be an important step in cataractogenesis and water-sol. antioxidants may be protective agents.

L20 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:587544 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 111:187544
TITLE: Effects of antioxidants or free radical scavengers on ***cataract*** formation induced by selenium
AUTHOR(S): Huang, Lili; Jia, Weihong; Chang, Changying
CORPORATE SOURCE: Dep. Biochem., Beijing Med. Univ., Beijing, Peop. Rep. China
SOURCE: Shengwu Huaxue Zazhi (1989), 5(4), 369-74
CODEN: SHZAE4; ISSN: 1000-8543
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The antioxidants or free radical scavengers GSH, ***vitamin*** E, ***vitamin*** C, mannitol, DMSO, and 3 synthetic anticataract compds. (AC1, AC2, and AC3) inhibited cataract formation induced by Se (Na2SeO3) in rats.

L20 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:491894 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 111:91894
TITLE: In ***vitro*** studies on the effect of cadmium on goat eye lens
AUTHOR(S): Srivastava, V. K.; Pandey, D. C.; Varshney, N.
CORPORATE SOURCE: Dep. Chem., Univ. Gorakhpur, Gorakhpur, 273 009, India
SOURCE: Current Science (1989), 58(12), 712-13
CODEN: CUSCAM; ISSN: 0011-3891
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Lenses were isolated from goat eyes and incubated with or without Cd and the lens levels of ascorbic acid, GSH, and proteins detd.; in the presence of Cd, a whitish coating developed on the lenses. Concns. of GSH and ascorbic acid decreased in lenses exposed to Cd in a concn. dependent manner. Sol. proteins also decreased and insol. proteins increased. The relations of the obsd. changes to cataract development during Cd exposure was discussed.

L20 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:55353 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 110:55353
TITLE: Change of ascorbic acid in rat lenses in the course of their ***cataract*** development initiated by galactose
AUTHOR(S): Lee, Teguk; Iwamoto, Takeo; Hitomi, Elza; Kanematsu, Takata; Yoshiura, Masahiko; Oinuma, Shinichi; Iriyama, Keiji
CORPORATE SOURCE: Sch. Med., Teikyo Univ., Japan
SOURCE: Jikeikai Medical Journal (1988), 35(3), 225-37
CODEN: JMEJAS; ISSN: 0021-6968
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A change in ascorbic acid, a water-sol. antioxidant, in rat lenses during the course of galactose-induced opacification was re-examd. by a selective, sensitive, and reliable high-performance liq. chromatog.-electrochem. detection method. Compared to the control group, the easily oxidizable water-sol. ***vitamin*** decreased in the lenses of the galactose-fed group with the development of opacification. The plausible role of glutathione and uric acid as the potent water-sol. antioxidants is discussed and compared with that of ascorbic acid.

L20 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:590 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 106:590
TITLE: Antioxidants in prevention of oxidative damage to the lens and ***cataract*** in vivo
AUTHOR(S): Bhuyan, Durga K.; Podos, Steven M.; Bhuyan, Kailash C.
CORPORATE SOURCE: Mt. Sinai Sch. Med., City Univ. New York, New York, NY, 10029, USA
SOURCE: Superoxide Superoxide Dismutase Chem., Biol. Med., Proc. Int. Conf., 4th (1986), Meeting Date 1985, 657-61. Editor(s): Rotilio, Giuseppe. Elsevier: Amsterdam, Neth.
CODEN: 55GJAL
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB The therapy of cataracts with antioxidants was studied in animal models of cataract (3-aminotriazole-induced and galactose-induced in rabbits and selenium-induced in rats). ***Vitamin*** E [1406-18-4] was effective in preventing both rabbit models of cataract and centrophenoxine [3685-84-5] was effective in arresting the progression of the galactose cataract model. In addn., these compds. decreased lens damage (lipid peroxidn.) in these models of cataract. The protective effects of antioxidants on oxidative stress-induced damage (lipid peroxidn.) were also studied in rabbit lens in ***vitro*** .

L20 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:532646 CAPLUS <<LOGINID::20060721>>
DOCUMENT NUMBER: 105:132646
TITLE: Prevention of diabetic cataractogenesis in streptozotocin-treated rats by subsequent ***vitamin*** E administration
AUTHOR(S): Hirai, Tatsuo; Majima, Yoshinao; Nakamura, Kimi; Ohta, Yoshiji; Ishiguro, Isao
CORPORATE SOURCE: Sch. Med., Fujita-Gakuen Health Univ., Toyoake, Japan
SOURCE: Atarashii Ganka (1986), 3(2), 247-50
CODEN: ATGAEX; ISSN: 0910-1810
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB d-.alpha.-Tocopherol [59-02-9] was given to rats at 335 mg/kg-day i.m. for 10 days, beginning 5 days after a single injection of streptozotocin (50 mg/kg, i.p.). Tocopherol administration inhibited lenticular vacuole formation and the loss of tocopherol assocd. with diabetogenic cataracts. It also reduced lenticular lipid accumulation but did not affect the diabetes-related decreases of GSH [***70-18-8***] and ascorbic acid [***50-81-7***] or the accumulation of sorbitol [50-70-4] in the lens. Lenticular ***vitamin*** E is considered to play a crit. role in diabetic cataract formation.

=> log y

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CA SUBSCRIBER PRICE	-23.25	-23.25

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